APPENDIX I

GLOSSARY

A-END— hydraulic pump that controls the output of the B-end through a valve plate and a constant speed motor.

AAW— Anti-air warfare.

ASUW— Anti-surface warfare.

ASW– Anti-submarine warfare.

AUR— All up round.

B-END— Converts fluid power from the A-end into a rotary mechanical motion.

BASE— The after end of the projectile.

BENCH MARKS— Installed for each equipment that has an alignment telescope and used throughout the life of the ship to verify alignment.

BICONVEX— A supersonic fin shape that causes considerable drag but is the strongest fin design.

BITE— Built-in test equipment.

BODY– The main part of the projectile and contains the greatest mass of metal.

BOURRELET— The smooth machined area that acts as a bearing to stabilize the projectile during its travel through the gun bore.

C&D— Command and Decision.

CAB UNIT— An A-end and B-end combination.

CCS— Central control station, same as Damage Control Central (DCC) on some ships.

CENTER-LINE REFERENCE MARKS— Established during initial construction to represent the ship's center line.

CENTER-LINE REFERENCE PLANE (CRP)— The reference used to establish the train zero alignment of all of the combat system equipment aboard ships.

CIC— Command information center.

CONREP— Connected replenishment between ships.

CONTROL SURFACE— Provides the necessary steering corrections to keep the missile in proper flight attitude and trajectory.

CONTROL SYSTEM— Responds to orders from the guidance system and steers the missile toward the target.

CONTROLLED AREA— A security area that surrounds an exclusion area.

CORRECTIVE MAINTENANCE— The replacement of components that are identified as worn, defective, or broken.

COSAL— An established shipboard allowance of parts for installed equipment.

CROSS WIND— The wind that blows at the right of the LOF.

CSMP— Current ships' maintenance project.

CYCLIC RATE OF FIRE— The maximum rate at which a weapon will fire in automatic operation, stated in rounds per minute.

DCC— Damage control central, same as Central Control Station (CCS) on some ships.

DEAD TIME— The time interval between the instant the fuze is set and the instant the projectile is fired.

DETONATORS— A device used in initiating high-explosive bursting charges.

DoD— Department of Defense.

DORSAL FIN— The stationary fin provided for in-flight stability and some lift.

DoT– Department of Transportation.

DOUBLE WEDGE— A supersonic fin shape that offers the least drag but lacks strength.

DRAG— The resistance offered by the air to the passage of the missile through it.

DTRM— Dual thrust rocket motor made of a solid-fuel propellant.

DUD-JETTISON UNIT— Ejects missiles overboard that fail to fire and are unsafe to return to the magazine.

EFFECTIVE CASUALTY RADIUS— The radius of a circular area around the point of detonation within which at least 50 percent of the exposed personnel will become casualties.

ELECTRICAL ZERO— The reference point for alignment of all synchro units.

ESCU— Electronic servo control unit.

ESI– Explosive safety inspection.

ESM— Electronic support measures.

EW— Electronic warfare.

EXCLUSION AREA— A security area that contains one or more nuclear weapons or one or more components of a nuclear weapon.

EXPLOSION— The practically instantaneous and violent release of energy which results from a sudden chemical change of a solid or liquid substance into gases.

EXPLOSIVES— Those substances or mixtures of substances that when suitably initiated by flame, spark, heat, electricity, friction, impact, or similar means, undergo rapid chemical reactions resulting in the rapid release of energy.

EXUDATE— A mixture of lower melting isomers of TNT, nitrocompounds of toluene of lower nitration, and possible nitrocompounds of other aromatic hydrocarbons and alcohols.

FCS— Fire control system.

FIXED AMMUNITION— Ammunition that has the cartridge case crimped around the base of the projectile.

FLASH POINT— The temperature in which lubricants give off a vapor.

FOD— Foreign object damage.

FUZES— The initiating device that detonates the warhead (payload).

GCP— Gun control panel.

GMLS— Guided missile launching system.

GMTR— Guided missile training round.

GUIDANCE SYSTEM– Keeps the missile on its proper flight path.

HERO— Hazards of Electromagnetic Radiation to Ordnance.

HIGH-PRESSURE (HP) AIR— Pneumatic air pressure ranging from 3,000 to 5,000 psi.

HSD— Heat sensing devices that are used in detection of slow or fast rise in temperature for automatic activation of magazine sprinkler systems.

HYDROSCOPIC— Explosives that easily absorbs moisture.

ICS– Integrated control station.

IFF— Identification friend or foe.

INITIAL VELOCITY (IV)— The speed at which a projectile is traveling at the instant it leaves the gun bore.

IPB— Illustrated parts breakdown is a publication that describes and illustrates all the components used in ordnance equipment.

LED— Light-emitting diode.

LIFT— The upward force that supports the missile in flight.

LOF— Line of fire is used to position the gun bore with respect to the LOS.

LOS— Line of sight is used to establish the present location of the target.

LOW-PRESSURE (LP) AIR— Pneumatic air pressure ranging up to 150 psi.

MACH NUMBER— The ratio of missile speed to the local speed of sound.

MAGAZINE AREA— The compartment, spaces, or passages on board ship containing magazine entrances that are intended to be used for the handling and passing of ammunition.

MAGAZINE— Any compartment, space, or locker that is used, or intended to be used, for the stowage of explosives or ammunition of any kind.

MAIN RELIEF VALVE— Protects the CAB unit from excessive pressure buildup and cavitation of the A-end.

MASTER REFERENCE PLANE (MRP)— The plane used as the machining reference to establish the foundation of the combat systems equipment. After initial construction, the MRP is only used as a reference plane following major damage or modernization.

MAXIMUM EFFECTIVE RANGE— The greatest distance at which a weapon maybe expected to fire accurately to inflict damage or casualties.

MAXIMUM RANGE— The greatest distance that the projectile will travel.

MCC– Main control console.

MEDIUM PRESSURE (MP) AIR— Pneumatic air pressure ranging from 151 to 1,000 psi.

MFCS— Missile fire control system.

MHE— Materials-handling equipment (industrial).

MODIFIED DOUBLE WEDGE— A supersonic fin shape that has relatively drag and is stronger.

MRC— Maintenance requirement cards.

NALC— Navy ammunition logistics code.

NEC— Navy enlisted classification code.

NEEW— The Net Equivalent Explosive Weight.

NPN— A transistor with the arrow that points away from the base.

NTDS— Naval tactical data system.

NWS— Naval Weapons Station.

OFFSET CENTER-LINE REFERENCE MARKS– Established during initial instruction to facilitate combat systems alignment. They are installed to prevent repeating center-line surveys during subsequent alignments.

OGIVE— The forward portion of a projectile.

OJT— On-the-job training.

ORDALTS— Authorized ordnance alterations.

ORTS— Operational readiness test system.

OSG— Order signal generator.

PA— System operating pressure ranging from 1,400 to 1,700 psi.

PC— Printed circuit card.

PDP– Power distribution panel.

PITCH— The turning rotation of a missile about its lateral axis.

PNP— A transistor with the arrow that points towards the base.

POWER OFF BRAKE— Stops the equipment movement during power failures, secures equipment movement against pitch and roll of the ship when system is inactive, provides for manual hand cranking during emergencies, installation, and maintenance.

PQS— Personnel qualification standards.

PREVENTIVE MAINTENANCE— The regular lubrication, inspection, and cleaning of equipment.

PRIMARY MAGAZINES— Ammunition stowage spaces, generally located below the main deck, and insofar as is practical, below the water-line.

PRIMERS— A device used to initiate the burning of a propellant charge by means of a flame.

PROPELLANTS— A device used to provide a pressure that, acting against an object to be propelled, will accelerate the object to the required velocity.

PRP— Pneumatically released pilot valve.

PYROTECHNIC— A device used for illumination, marking, and signaling.

Q-D— Quantity-Distance.

QUAL/CERT— Explosives-Handling Personnel Qualification Certification Program.

RANGE WIND— The wind that blows along the LOF, either with or against the projectile.

READY-SERVICE STOWAGE— Ammunition stowage facilities in the immediate vicinity of the weapon served.

READY-SERVICE MAGAZINES— Spaces physically convenient to the weapons they serve; they provide permanent stowage for part of the ammunition allowance.

RESERVOIRS— Used to dissipate heat, remove contamination, separate air, and store fluid in hydraulic systems.

RFI— Radio frequency interference.

RFI— Ready for issue.

ROLL— The rotation of a missile about the longitudinal axis.

ROTATING BAND— The circular band made of commercially pure copper, copper alloy, or plastic seated in a scored cut in the after portion of the projectile body.

RSR— Ready service rings.

SEPARATE-LOADING AMMUNITION— Ammunition that is gun sizes 8 inches and larger.

SEPARATED AMMUNITION— Ammunition that consists of two units-the projectile assembly and cartridge assembly.

SERVO PRESSURE— Hydraulic fluid pressure ranging from 400 to 500 psi.

SHIP BASE PLANE (SBP)— The basic plane of origin and is perpendicular to the CRP and includes the base line of the ship.

SIGHT DEFLECTION— The angle that the plane through the gun bore is deflected left or right from the LOS.

SIGHT ANGLE— The difference between the LOF and LOS and measured perpendicular to the trunnion axis.

SLIP RING— Provides a continuous electrical connection between the cabling of the stationary structure of the gun mount or launcher and a rotary joint for the cooling system piping.

SMALL ARMS— Any firearm with a caliber (cal.) of .60 inch or smaller and all shotguns.

SMS— Surface missile system.

STREAM— Standard tensioned replenishment alongside method.

SUPERCHARGE PRESSURE— Hydraulic fluid pressure up to 150 psi.

SUSTAINED RATE OF FIRE— The average number of rounds fired per minute with the number of minutes this rate can be sustained without damage to the weapon.

TDD— Target detection device.

THRUST— The force that propels the missile forward at speeds sufficient to sustain flight.

USCG— United States Coast Guard.

VAC— Volts of alternating current.

VDC— Volts of direct current.

VERTREP— Vertical replenishment by helo to ship.

VISCOSITY— The measurement of internal resistance to flow of fluids.

VLA— Vertical launch asroc.

VLA— Vertical launching system.

WARHEAD— The payload of the missile.

WCS— Weapons control system.

WDS— Weapons direction system.

WEAPON CONTROL REFERENCE PLANE (WCRP)— This plane is established during initial construction and used during alignment verification.

YAW— The turning of a missile about the vertical axis.

APPENDIX II

REFERENCES USED TO DEVELOP THIS TRAMAN

NOTE

Although the following references were current when this TRAMAN was published, their continued currency cannot be assured. You, therefore, need to ensure that you are studying the latest revision.

Chapter 1

Ammunition Afloat, NAVSEA OP 4, Commander, Naval Sea Systems Command, Washington, DC, 1988.

Identification of ammunition, NAVSEA SW010-AF-ORD-010, Commander, Naval Sea Systems Command, Washington, DC, 1990.

Navy Gun Ammunition, NAVSEA *SW030-AA-MMO-010,* Commander, Naval Sea Systems Command, Washington, DC, 1985.

Pyrotechnic, Screening Marking, and Countermeasure Devices, Volume 1, NAVSEA SW050-AB-MMA-010, Commander, Naval Sea Systems Command, Washington, DC, 1990.

Transportation and Storage Data for Ammunition, Explosives, and Related Hazardous Materials, Volume 2, NAVSEA SW 020-AC-SAF-020, Commander, Naval Sea Systems Command, Washington, DC, 1995.

United States Navy Ammunition, Historical and Functional Data, NAVSEA SW010-AB-GTP-010, Commander, Naval Sea Systems Command, Washington, DC, 1981.

United States Navy Ordnance Safety Precautions, NAVSEA OP 3347, Commander, Naval Sea Systems Command, Washington, DC, 1972.

Chapter 2

Ammunition Afloat, NAVSEA OP 4, Commander, Naval Sea Systems Command, Washington, DC, 1988.

Approved Harding Equipment for Weapons and Explosives, NAVSEA OP 2173, Volumes 1 and 2, Commander, Naval Sea Systems Command, Washington, DC, 1971.

Approved Handling Equipment for Weapons and Explosives, NAVSEA OP 2173, NAVAIR 19-100-1.1, Naval Sea Systems Command, Washington, DC, 1981.

Explosives-Handling Personnel Qualification and Certification (Qual/Cert) program, COMNAVSURFLANTINST 8023.4F/COMNAVSURFPAC-INST 8023.5B, Commander, Naval Surface Force, U.S. Atlantic Fleet, Norfolk, VA, and Commander, Naval Surface Force, U.S. Pacific Fleet, San Diego, CA, 1991.

Functional Introduction to Vertical Launching System Mk 41, NAVSEA SW394-AF-MMO-020/050VLS, Commander, Naval Sea Systems Command, Washington, DC, 1992.

Handling Ammuntion, Explosives, and Hazardous Materials with Industrial Materials-Handling Equipment (MHE), NAVSEA OP 4098, Commander, Naval Sea Systems Command, Washington, DC, 1978.

Identification of Ammunition, NAVSEA SW010-AF-ORD-010, Commander, Naval Sea Systems Command, Washington, DC, 1990.

Magazine Sprinkler Systems, NAVSEA S9522-AA-HBK-010, Commander, Naval Sea Systems Command, Washington, DC, 1989.

Navy Gun Ammunition, NAVSEA SW030-AA-MMO-010, Commander, Naval Sea Systems Command, Washington, DC, 1985.

Shipboard Ammunition Handling and Stowage, Naval Ship' Technical Manual, S9086-XG-STM-010, Chapter 700, Naval Sea Systems Command, Washington, DC, 1991.

Transportation and Storage Data for Ammunition, Explosives, and Related Hazardous Materials, Volume 2, NAVSEA SW 020-AC-SAF-020, Commander, Naval Sea Systems Command, Washington, DC, 1995.

Chapter 3

25MM M242 Automatic Gun, Description Operation and Illustrated Parts Breakdown (IPB), SW360-AB-MMO-010, Commander, Naval Sea Systems Command, Washington, DC, 1990.

U.S. Department of the Air Force, *Military Shotgun, 12 Gauge, Pump Action, Model 870,* TO 11W3-6-2-1, Secretary of the Air Force, Washington, DC, 1972.

U.S. Department of the Army, *Browning Machine Gun, Caliber .50 HB, M2,* Field Manual, FM 23-65, Headquarters, Department of the Army, Washington, DC, 1972.

U.S. Department of the Army, 40-MM *Grenade Launcher M79,* Technical Manual, TM 9-1010-205-10, Headquarters, Department of the Army, Washington, DC, 1985.

U.S. Department of the Army, *40-MM Grenade Launcher M79,* Technical Manual, TM 9-1010-205-24, Headquarters, Department of the Army, Washington, DC, 1972.

U.S. Department of the Army, *40-MM Grenade Launcher M303,* Technical Manual, TM 9-1010-221-10, Headquarters, Department of the Army, Washington, DC, 1984.

U.S. Department of the Army, *Machine Gun, 7.62-MM, M60,* Technical Manual, TM 9-1005-224-10, Headquarters, Department of the Army, Washington, DC, 1985.

U.S. Department of the Army, *Machine Gun, 7.62-MM, M60,* Technical Manual, TM 9-1005-224-24, Headquarters, Department of the Army, Washington, DC, 1987.

U.S. Department of the Army, *Machine Gun, 40-MM, Mk 19, Mod 3,* Technical Manual, TM 9-1010-230-10, Headquarters, Department of the Army, Washington, DC, 1991.

U.S. Department of the Army, *Mortar, 60MM, M224,* Technical Manual, TM 9-1010-223-10, Headquarters, Department of the Army, Washington, DC, 1987.

U.S. Department of the Army, *Mortar, 81-MM, M29A1,* Technical Manual, TM 9-1015-200-10, Headquarters, Department of the Army, Washington, DC, 1985.

U.S. Department of the Army, *Pistol, Caliber .45, Automatic, M1911A1,* Technical Manual, TM 9-1005-211-12, Headquarters, Department of the Army, Washington, DC, 1968.

U.S. Department of the Navy, *Pistol, semiautomatic, 9mm M9,* Technical Manual, Navy SW 370-AA-OPI-010/9mm, Headquarters, Department of the Navy, Washington, DC, 1990.

U.S. Department of the Army, *Revolver, Caliber .38 Special: Smith and Wesson Military and Police, M10, Technical Manual, TM 9-1005-206-14&P-1,* Headquarters, Department of the Army, Washington, DC, 1985.

U.S. Department of the Army, *Rifle, 5.56-MM, M16,* Technical Manual, TM 9-1005-249-10, Headquarters, Department of the Army, Washington, DC, 1985.

U.S. Department of the Army, *Rifle, 7.62-MM, M14,* Technical Manual, TM-9-1005-223-10, Headquarters, Department of the Army, Washington, DC, 1972.

U.S. Department of the Army, *Rifle, 7.62-MM, M14,* Technical Manual, TM 9-1005-223-20, Headquarters, Department of the Army, Washington, DC, 1972.

Chapter 4

Basic Machines, NAVEDTRA 10624-A1, Naval Education and Training Support Service, Washington, DC, 1988.

Compressed Air Plants and Systems, Naval Ships' Technical Manual, Chapter 551, Commander, Naval Sea Systems Command, Washington DC, 1987.

Fluid Power, NAVEDTRA 12964, Naval Education and Training Program Management Support Activity, Pensacola, FL, 1990.

Guided Missile Launching System Mk13 Mods 4, 5, 6, and 7 NAVSEA OP 4470, Naval Sea Systems Command, Washington, DC, 1991.

Guided Missile Launching System Mk26, SW394-HO-MMO-010, Naval Sea Systems Command, Washington, DC, 1986.

Chapter 5

5"/54-Caliber Gun Mount Mark 45 Mod 0, NAVSEA OP 3392, Volume 1, Commander, Naval Sea Systems Command, Washington, DC, 1973.

5"/54-Caliber Gun Mount Mark 45 Mod 1, Volume 1, Part 1, NAVSEA SW323-01-MMO-010, Commander, Naval Sea Systems Command, Washington, DC, 1985.

*76-mm 62-Caliber Gun Mount Mark 75 Mos 0 and 1, SW314-AO-*MMM-010/GM MK 75 0-1, Commander, Naval Sea Systems Command, Washington, DC, 1981.

Guided Missile Launching System Mk13 Mods 4, 5, 6, and 7 NAVSEA OP 4470, Naval Sea Systems Command, Washington, DC, 1991.

Navy Electricity and Electronics Training Series, Module 1, *Introduction to Matter, Energy, and Direct Current,* NAVEDTRA 172-01-00-79, Naval Education and Training Program Development Center, Pensacola, FL 1979.

Navy Electricity and Electronics Training Series, Module 2, *Introduction to Alternating Current and Transformers,* NAVEDTRA 172-02-00-85, Naval Education and Training Program Development Center, Pensacola, FL, 1985.

Navy Electricity and Electronics Training Series, Module 3, *Introduction to Circuit Protection, Control, and Measurement,* NAVEDTRA 172-03-00-85, Naval Education and Training Program Development Center, Pensacola, FL 1985.

Navy Electricity and Electronics Training Series, Module 16, *Introduction to Test Equipment,* NAVEDTRA 172-16-00-84, Naval Education and Training Program Development Center, Pensacola, FL, 1984.

Chapter 6

5"/54-Caliber Gun Mount Mark 45 Mod 0, NAVSEA OP 3392, Volume 1, Commander, Naval Sea Systems Command, Washington, DC, 1973.

5"/54-Caliber Gun Mount Mark 45 Mod 1, Volume 1, Part 1, NAVSEA SW323-01-MMO-010, Commander, Naval Sea Systems Command, Washington, DC, 1985.

*76-mm 62-Caliber Gun Mount Mark 75 Mods 0 and 1, SW314-AO-*MMM-010/GM MK 75 0-1, Commander, Naval Sea Systems Command, Washington, DC, 1981.

Clearing of Live Ammunition from Guns, NAVSEA SW300-BC-SAF-010, Commander, Naval Sea Systems Command, Washington, DC, 1985.

Chapter 7

Guided Missile Launching System Mk13 Mods 4, 5, 6, and 7 NAVSEA OP 4470, Naval Sea Systems Command, Washington, DC, 1991.

Guided Missile Launching System Mk26, SW394-HO-MMO-010, Naval Sea Systems Command, Washington, DC, 1986.

Guided Missile Launching System Mk41, SW394-AF-MMO-010, Naval Sea Systems Command, Washington, DC, 1991.

Guided Missile Training Round Mk60 Mod 6, SW850-A6-MMO-010, Naval Sea Systems Command, Washington, DC, 1984.

Tomahawk Weapons System Mk 36 and Mk 37 Block III SW261-DE-MM0-030/Tomahawk, Department of the Navy, Program Executive Officer, Cruise Missiles Project and Unmanned Aerial Vehicles Joint Project Office, Washington, DC, 1994.

Chapter 8

Guided Missile Launching System Mk13 Mods 4, 5, 6, and 7 NAVSEA OP 4470, Naval Sea Systems Command, Washington, DC, 1991.

Guided Missile Launching System Mk26, SW394-HO-MMO-010, Naval Sea Systems Command, Washington, DC, 1986.

Guided Missile Launching System Mk41, SW394-AF-MMO-010, Naval Sea Systems Command, Washington, DC, 1991.

Guided Missile Training Round Mk60 Mod 6, SW850-A6-MMO-010, Naval Sea Systems Command, Washington, DC, 1984.

Tomahawk Weapons System Mk 36 and Mk 37 Block III, SW261-DE-MM0-030/Tomahawk, Department of the Navy, Program Executive Officer, Cruise Missiles Project and Unmanned Aerial Vehicles Joint Project Office, Washington, DC, 1994.

Chapter 9

Safety Precautions for Standard Missile SM-1, SM-2, and VLS (MR & ER) Guided Missiles, Commander, Naval Sea Systems Command, Washington, DC, 1988.

*Tomahawk Weapons System Mk 36 and Mk 37 Block III SW261-DE-MM0-*030/Tomahawk, Department of the Navy, Program Executive Officer, Cruise Missiles Project and Unmanned Aerial Vehicles Joint Project Office, Washington, DC, 1994.

Chapter 10

Fire Controlman Third Class, NAVEDTRA 10276-1, Naval Education and Training Program Management Support Activity, Pensacola, FL 1988.

Guided Missile Training Round Mark 60 Mod 4, NAVSEA SW850-A4-MM0-010, Commander, Naval Sea Systems Command, Washington, DC, 1989.

Gunfire Control System (GFCS) Mk 86 Mods 8, 9, and 10, NAVSEA OP 4543, Volume 1, Commander, Naval Sea Systems Command, Washington, DC, 1982.

Maintenance Manual for Fire Control System Mk 92 Mod 2, Description, Operation, and Maintenance (U), SW271-C2-MMO-010/(C) Mk *92* Mod *2,* Volume 1, Part 1, Commander, Naval Sea Systems Command, Washington, DC, 1987.

Shipboard Electronics Material Officer, NAVEDTRA 10478-A1, Naval Education and Training Program Development Center, Pensacola, FL, 1982.

Chapter 11

Technical Manual for Theory of Combat Systems Alignment, SW225-AO-MMA-010/OP762, ALIGNTHEORY, Commander, Naval Sea Systems Command, Washington, DC, 1987.

Chapter 12

Basic Machines, NAVEDTRA 10624-A1, Naval Education and Training Program Management Support Activity, Pensacola, FL 1988.

Basic Military Requirements, NAVEDTRA 12043, Naval Education and Training Program Management Support Activity, Pensacola, FL, 1992.

Blueprint Reading and Sketching, NAVEDTRA 12014, Naval Education and Training Program Management Support Activity, Pensacola, FL 1988.

Fluid Power, NAVEDTRA 12964, Naval Education and Training Program Management Support Activity, Pensacda, FL 1990.

Lubrication of Ordnance Equipment, NAVSEA OD 3000, Commander, Naval Sea Systems Command, Washington, DC, 1978.

Ship Configuration and Logistics Support System, NAVSEA Technical Specification System, 9090-700A Commander, Naval Sea Systems Command, Washington, DC, 1988.

Technical Manual for Theory of Combat Systems Alignment, SW22S-AO-MMA-010/OP762, ALIGNTHEORY, Commander, Naval Sea Systems Command, Washington, DC, 1987.

Chapter 13

Combat Systems Readiness Review (CSRR), COMNAVSURFLANTINST 9093.1, Commander, Naval Surface Force, United States Atlantic Fleet, Norfolk, VA, 1984.

Conventional Ammunition Integrated Management System (CAMS), SPCC Instruction 8010.12, SPCC, Mechanicsburg, PA, 1992.

IM 3 & 2, NAVEDTRA 10193-D, Naval Education and Training Program Management Support Activity, Pensacola, FL 1986.

Operational Reports, NWP 10-1-10, Office of CNO, Washington, DC, 1987.

Physical Security Instruction for Conventional Arms, Ammunition, and Explosives, OPNAVINST 5530.13, CNO, Washington, DC, 1991.

Physical Security and Loss Prevention Manual, OPNAV Instruction 5530.14, CNO, Washington, DC, 1983.

Ships' Maintenance Material Management (3-M) Manual, Department of the Navy, Office of the Chief of Naval Operations, Washington, DC, 1987.

Standard Oganization and Regulations of the U.S. NAVY (SORN), OPNAVINST 3120.32, CNO, Washington, DC, 1987.

A

B

C

Q

R

S

T

W

☆ U. S. GOVERNMENT PRINTING OFFICE: 1997-532-154/60004